

SENIOR MECHANICAL ENGINEER

DEFINITION:

Under general direction, to perform difficult and responsible professional mechanical engineering work in the field and office; to supervise subordinate professional and technical engineering personnel engaged in such work; and to perform related work.

DISTINGUISHING CHARACTERISTICS:

Senior Mechanical Engineers are generally responsible for personnel and activities for a major engineering functional section or serve as project leaders for a highly technical and specialized function. This position differs from other Senior Engineer classifications in that duties emphasize energy management, mechanical systems in buildings, and other construction projects, building automation, and enforcement of mechanical, and plumbing code standards.

EXAMPLES OF DUTIES:

Provides technical expertise on matters pertaining to the Department's policies, procedures, practices, standards, and positions on pending discretionary actions to public and private bodies and individuals; responsible for recommending selection and fee negotiations in order to provide competent, cost effective consultant services; responsible for adequately ensuring that all technical actions and documents produced by the organization, incorporate and are consistent with good engineering practice, safety features, ordinances, policies and statutes, and protect public health and safety, minimize environmental impact and conserve public funds. Actions will involve the following disciplines in Mechanical Engineering principles of power generation, energy conservation practices, heating and cooling system design, construction practices relating to mechanical systems, utility distribution systems (water, fuel gas, etc.) and solar system applications; responsible within delegated authority for planning, organizing, staffing, directing and controlling resources assigned in order to best accomplish assigned functions within budget at maximum effectiveness.

MINIMUM QUALIFICATIONS:

Thorough Knowledge of:

- Mechanical engineering, specifically principles of power generation, energy conservation practices, heating and cooling system design, construction practices relating to mechanical systems, utility distribution systems, (electricity, gas, water) and solar energy system application.
- Building system automation.
- Cogeneration systems.
- Plan preparation of code compliance.

General Knowledge of:

- Construction contract law, administration and labor relations.
- Organization and operation of private firms engaged in Mechanical Engineering services and facilities.
- Principles of cost accounting and engineering economics.

- Supervisory techniques.

Skills and Abilities to:

- Identify and define technical and administrative problems, identify and evaluate alternatives solutions, and select and act on the best alternative.
- Control, plan, organize, and staff.
- Supervise subordinates and organizational elements.

EDUCATION/EXPERIENCE:

Education, training, and/or experience which would likely demonstrate the knowledge, skills and abilities stated above. An example of qualifying education/experience is: Five (5) years of progressively responsible mechanical engineering experience in mechanical systems code compliance, development of energy conservation methodologies, technical writing, design of utility systems, analysis of heating, cooling and ventilation systems, building automation, and related aspects of mechanical engineering with demonstration of some supervisory experience. Two (2) years of the experience must have been at the level of, or equivalent to, Associate Mechanical Engineer with the County of San Diego.

SPECIAL NOTES, LICENSES, OR REQUIREMENTS:

Certification:

Possession of a valid California State Certificate of Registration for Mechanical Engineers.